

IN THE CLAIMS:

Please CANCEL claims 8, 11 and 23 without prejudice to or disclaimer of the recited subject matter.

Please AMEND claims 1-7, 9, 10, 12-20, 22, 24, 25 and 27-31, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1. (Currently Amended) ~~A positioning apparatus of an exposure apparatus~~ An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said ~~positioning~~ apparatus comprising:

a chamber;

a substituting unit for substituting a gas in said chamber from a first gas to ~~[[a]]~~ the second gas;

a static pressure gas bearing provided in said chamber;

a gas supply unit for supplying the second gas to said static pressure gas bearing;

a control unit for controlling said gas supply unit to supply the second gas to said static pressure gas bearing when said substituting unit substitutes the gas in said chamber from the first gas to the second gas; and

a bearing exhaust unit for exhausting the gas of said static pressure gas bearing.

2. (Currently Amended) ~~The~~ An apparatus according to claim 1, further comprising an evacuating unit for evacuating said chamber by exhausting the gas therefrom when substituting the gas in said chamber from the first gas to the second gas.

3. (Currently Amended) ~~The~~ An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing before a start of exhausting the gas in said chamber.

4. (Currently Amended) ~~The~~ An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing simultaneously with exhausting the gas in said chamber.

5. (Currently Amended) ~~The~~ An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing after a start of exhausting the gas in said chamber.

6. (Currently Amended) ~~The~~ An apparatus according to claim 2, wherein said evacuating unit and the bearing exhaust unit are the same.

7. (Currently Amended) ~~The~~ An apparatus according to claim 1, wherein the second gas is helium.

8. (Cancelled)

9. (Currently Amended) ~~A positioning apparatus of an exposure apparatus~~ An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said ~~positioning~~ apparatus comprising:

a chamber;

a substituting unit for exhausting a first gas from said chamber and introducing a second gas into said chamber;

a static pressure gas bearing provided in said chamber;

a gas supply pipe for supplying a working gas to said static pressure gas bearing;

and

a bearing exhaust unit for exhausting a gas of said static pressure gas bearing through said gas supply pipe.

10. (Currently Amended) ~~The~~ An apparatus according to claim 9, wherein the second gas is helium.

11. (Cancelled)

12. (Currently Amended) An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said apparatus comprising:

a chamber;

a positioning ~~apparatus~~ unit provided in said chamber to position ~~[[a]]~~ the substrate;

a substituting unit for substituting ~~[[a]]~~ the second gas for a first gas in said chamber;

a static pressure gas bearing, provided in said chamber, used for supporting said positioning ~~apparatus~~ unit;

a gas supply unit for supplying a working gas to said static pressure gas bearing;

a control unit for controlling said gas supply unit to supply the second gas to said static pressure gas bearing when substituting the gas in said chamber from the first gas to the second gas; and

a bearing exhaust unit for exhausting the gas of said static pressure gas bearing.

13. (Currently Amended) ~~The~~ An apparatus according to claim 12, wherein said exposure apparatus is an X-ray exposure apparatus employing a synchrotron radiation beam as an exposure beam.

14. (Currently Amended) An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said apparatus comprising:

a chamber;

a positioning ~~apparatus~~ unit provided in said chamber to position a substrate;

a substituting unit for exhausting a first gas from said chamber and introducing
[[a]] the second gas into said chamber;

a static pressure gas bearing, provided in said chamber, for supporting said
positioning unit;

a gas supply pipe for supplying a working gas to said static pressure gas bearing;
and

a bearing exhaust unit for exhausting a gas in said static pressure gas bearing
through said gas supply pipe.

15. (Currently Amended) ~~The~~ An apparatus according to claim 14, wherein said
exposure apparatus is an X-ray exposure apparatus using a synchrotron radiation beam as an
exposure beam.

16. (Currently Amended) An atmosphere substituting method of substituting an
atmosphere in a chamber of an exposure apparatus for exposing a substrate to a pattern in an
atmosphere of a second gas, said method comprising:

a substituting step of substituting a gas in [[a]] the chamber from a first gas to
[[a]] the second gas;

a bearing exhaust step of exhausting, during ~~the~~ said substituting step, the first gas
of ~~said~~ a static pressure gas bearing in the chamber; and

a gas supply step of supplying the second gas to ~~said~~ the static pressure gas bearing with ~~said~~ a gas supply unit.

17. (Currently Amended) ~~The~~ A method according to claim 16, further comprising an ~~exhausting/evacuating~~ evacuating step of evacuating said chamber by exhausting the gas therefrom when substituting the gas in said chamber from the first gas to the second gas.

18. (Currently Amended) ~~The~~ A method according to claim 17, wherein the second gas is supplied in ~~the~~ said gas supply step before a start of exhausting the gas in ~~the~~ ~~exhausting/evacuating~~ said evacuating step.

19. (Currently Amended) ~~The~~ A method according to claim 17, wherein the second gas is supplied in ~~the~~ said gas supply step simultaneously with exhausting the gas in ~~the~~ ~~exhausting/evacuating~~ said evacuating step.

20. (Currently Amended) ~~The~~ A method according to claim 17, wherein the second gas is supplied in ~~the~~ said gas supply step after a start of exhausting the gas in ~~the~~ ~~exhausting/evacuating~~ said evacuating step.

21. (Cancelled)

22. (Currently Amended) ~~The~~ A method according to claim 16, wherein the second gas is ~~Helium~~ helium.

23. (Cancelled)

24. (Currently Amended) A device manufacturing method ~~including~~ comprising a substituting step of substituting a gas in a chamber, incorporating a positioning apparatus ~~using~~ supported by a static pressure gas bearing, from a first gas to a second gas, and an exposure step of positioning a ~~target exposure~~ substrate with the positioning apparatus and exposing the substrate to a predetermined pattern after the said substituting step, said method comprising:

a bearing exhaust step of exhausting, during ~~the~~ said substituting step, the first gas of ~~said~~ the static pressure gas bearing; and

a gas supply step of supplying the second gas to ~~said~~ the static pressure gas bearing with ~~said~~ a gas supply unit.

25. (Currently Amended) ~~The~~ A method according to claim 24, further comprising an ~~exhausting/evacuating~~ evacuating step of evacuating the chamber by exhausting the gas therefrom when substituting the gas in ~~the~~ said substituting step, wherein the second gas is supplied in ~~the~~ said gas supply step before a start of, simultaneously with, or after a start of exhausting the gas in ~~the exhausting/evacuating~~ said evacuating step.

26. (Cancelled)

27. (Currently Amended) The A method according to claim 24, wherein the gas is exhausted in the said bearing ~~exhausting~~ exhaust step after the second gas is supplied in the said gas supply step.

28. (Original) The A method according to claim 25, ~~further comprising a wherein in said~~ bearing ~~exhausting step of exhausting, in substituting the gas in the substituting~~ exhaust step, the gas of ~~said~~ the static pressure gas bearing is exhausted through a pipe connected thereto, the gas being exhausted simultaneously with exhausting ~~in the exhausting/evacuating~~ in said evacuating step.

29. (Currently Amended) The A method according to claim 28, wherein an exposure in the said exposure step is performed by using a synchrotron radiation beam, and the second gas is helium.

30. (Currently Amended) A device manufacturing method comprising a substituting step of substituting a gas in a chamber, incorporating a positioning apparatus supported by a static pressure gas bearing, by exhausting a first gas from a the chamber ~~incorporating a positioning apparatus using a static pressure gas bearing~~ and introducing a second gas into the chamber, and an exposure step of positioning a ~~target exposure~~ substrate with the positioning apparatus and

exposing the substrate to a ~~predetermined~~ pattern after ~~the~~ said substituting step, said method comprising:

a bearing exhaust step of exhausting the gas of ~~said~~ the static pressure gas bearing through a pipe connected thereto simultaneously with exhausting the gas in ~~the~~ said substituting step.

31. (Currently Amended) ~~The~~ A method according to claim 30, wherein an exposure in ~~the~~ said exposure step is performed by using a synchrotron radiation beam, and the second gas is ~~Helium~~ helium.